This listing of claims will replace all prior versions and Listings of Claims in the application:

Listing of Claims:

Claims 1-25 (Cancelled):

Claim 26 (Previously Presented): A method for fabricating a spacer of a gate structure, the method comprising:

performing a first etch process implementing a first etchant gas, the first etch process configured to remove a portion of a spacer layer, leaving a thin spacer layer, the first etch process configured to implement an interferometry endpoint (IEP) detection method to detect the removal of the portion of the spacer layer; and

performing a second etch process implementing a second etchant gas, the second etch process including monitoring by a non-IEP etch endpoint process, the second etch process configured to remove the thin spacer layer, leaving the spacer for the gate structure,

wherein the second etchant gas includes a combination of O_2, HBr, and SF_6.

Claim 27 (Previously Presented): The method as recited in claims 26, wherein the first etchant gas includes a combination of C_2F_6, CH_2F_2, and O_2, a combination of CF_4, CH_2F_2, and O_2, or a combination of CF_4, HBr, and O_2.

Claim 28 (Previously Presented): The method as recited in claim 26, further comprising:

discontinuing the first etch process upon removing the portion of the spacer layer, leaving the thin spacer layer.

Claims 29 (Previously Presented): The method as recited in claim 26, further comprising:

discontinuing the second etch process in response to monitoring the removal of the thin spacer layer by the non-IEP etch endpoint process and when the second etch process has continued for a predetermined period of time.

Claim 30 (Previously Presented): The method of claim 26, wherein the IEP etch endpoint monitoring method is configured to monitor a photon beam reflected by the spacer layer so as to determine the thickness of an etch depth during the first etch operation implementing a distance between consecutive maximum intensities.

Claim 31 (Previously Presented): The method of claim 30, wherein the non-IEP etch endpoint monitoring method is optical emission spectroscopy (OES).

Claim 32 (Previously Presented): The method of claim 26, wherein the spacer layer is a nitride layer.

Claim 33 (Previously Presented): A method for fabricating a silicon nitride spacer, the method comprising:

performing a first etch process implementing a first etchant gas in a plasma chamber, the first etch process configured to control a removal of a portion of a silicon nitride layer from over a surface of a substrate by monitoring a light reflected by the silicon nitride layer,

the first etch process further configured to leave a thin silicon nitride layer over the surface of the substrate and to maintain a thickness of the thin silicon nitride layer substantially uniform throughout the surface of the substrate and a gate structure formed thereon, the first etchant gas configured to include a combination of CF_4, HBr, and O_2; and

performing a second etch process implementing a second etchant gas, the second etch process including monitoring an optical signal produced by a second plasma during the second etch operation, the second etch process configured to remove the thin silicon nitride layer, leaving the silicon nitride spacer for the gate structure.

Claim 34 (Previously Presented): The method as recited in claim 33, further comprising:

purging a first plasma content defined within the plasma chamber.

Claim 35 (Previously Presented): The method as recited in claim 33, wherein the second etch process is performed for a predetermined period of time.

Claim 36 (Previously Presented): The method as recited in claim 33, wherein the first etch operation and the second etch operation are performed *in situ*.

Claim 37 (Previously Presented): The method as recited in claim 33, wherein monitoring the light reflected by the silicon nitride layer includes,

directing a photon beam onto the silicon nitride layer;

observing a reflected photon beam reflected by the silicon nitride layer; and

determining an etch depth as the first etch operation proceeds.

Claim 38 (Previously Presented): The method of claim 37, wherein determining the etch depth includes:

monitoring an intensity of the reflected photon beam;

determining a distance between a pair of consecutive maximum intensities; and

determining the thickness of the etch depth implementing the distance between consecutive maximum intensities.

Claim 39 (Previously Presented): The method as recited in claim 33, wherein the second etchant gas includes a combination of C_2F_6, CH_2F_2, and O2, or a combination of O_2, HBr, and SF_6.

Claim 40 (Previously Presented): A method for fabricating a nitride spacer of a gate structure, the method comprising:

performing a first etch process using a first etchant gas, the first etch process implementing an interferometry endpoint (IEP) detection process to detect a removal of a portion of a nitride spacer layer;

discontinuing the first etch process upon removing the portion of the nitride spacer layer, leaving a thin nitride spacer layer;

performing a second etch process using a second etchant gas implementing optical emission spectroscopy (OES) endpoint monitoring process, the second etch process

configured to remove the thin nitride spacer layer, leaving the nitride spacer for the gate structure; and

discontinuing the second etch process in response to the OES monitoring process,

wherein the first etchant gas includes a combination of C_2F_6, CH_2F_2, and O_2 and the second etchant gas includes a combination of O_2, HBr, and SF_6, the first etchant gas includes a combination of CF_4, CH_2F_2, and O_2 and the second etchant gas includes a combination of O_2, HBr, and SF_6, the first etchant gas includes a combination of CF_4, HBr, and O_2 and the second etchant gas includes a combination of C_2F_6, CH_2F_2, and O_2, or the first etchant gas includes a combination of CF_4, HBr, O_2 and the second etchant gas includes a combination of O_2, HBr, and SF_6.

Claim 41 (Previously Presented): The method of claim 40, wherein a thickness of the thin nitride spacer layer is configured to range between approximately about 50 Å and 300 Å.

Claim 42 (Previously Presented): The method of claim 40, wherein a thickness of the thin nitride layer is configured to range between approximately about 100 Å and 200 Å.

Claim 43 (Previously Presented): The method of claim 40, wherein a thickness of the thin nitride spacer layer is configured to be about 100 Å.

Claim 44 (Previously Presented): A method for fabricating a spacer of a gate structure, the method comprising:

performing a first etch process, the first etch process configured to remove a portion of a spacer layer, leaving a thin spacer layer, the first etch process configured to implement an interferometry endpoint (IEP) detection method to detect the removal of the portion of the spacer layer; and

performing a second etch process implementing a second etchant gas, the second etch process including monitoring by a non-IEP etch endpoint process, the second etch process configured to remove the thin spacer layer, leaving the spacer for the gate structure,

wherein the second etchant gas includes a combination of O_2, HBr, and SF_6 or a combination of C_2F_6, CH_2F_2, and O_2 wherein a percentage by volume of C_2F_6 is configured to range between approximately 10% and 22%, a percentage by volume of CH_2F_2 is configured to range between approximately 37% and 58%, and a percentage by volume of O_2 is configured to range between approximately 29% and 48%.

Claim 45 (Previously Presented): The method as recited in claim 44, further comprising:

discontinuing the first etch process upon removing the portion of the spacer layer, leaving the thin spacer layer.

Claims 46 (Previously Presented): The method as recited in claim 44, further comprising:

discontinuing the second etch process in response to monitoring the removal of the thin spacer layer by the non-IEP etch endpoint process and when the second etch process has continued for a predetermined period of time.

Claim 47 (Previously Presented): The method of claim 44, wherein the IEP etch endpoint monitoring method is configured to monitor a photon beam reflected by the spacer layer so as to determine the thickness of an etch depth during the first etch operation implementing a distance between consecutive maximum intensities.

Claim 48 (Previously Presented): A method for fabricating a silicon nitride spacer, the method comprising:

performing a first etch process implementing a first etchant gas in a plasma chamber, the first etch process configured to control a removal of a portion of a silicon nitride layer from over a surface of a substrate by monitoring a light reflected by the silicon nitride layer, the first etch process further configured to leave a thin silicon nitride layer over the surface of the substrate and to maintain a thickness of the thin silicon nitride layer substantially uniform throughout the surface of the substrate and a gate structure formed thereon; and

performing a second etch process implementing a second etchant gas, the second etch process including monitoring an optical signal produced by a second plasma during the second etch operation, the second etch process configured to remove the thin silicon nitride layer, leaving the silicon nitride spacer for the gate structure, the second etchant gas configured to include a combination of O_2, HBr, and SF_6 or a combination of C_2F_6, CH_2F_2, and O_2, wherein a percentage by volume of C_2F_6 is configured to range between approximately 10% and 22%, a percentage by volume of CH_2F_2 is configured to range between approximately 37% and 58%, and a percentage by volume of O_2 is configured to range between approximately 29% and 48%.

Claim 49 (Previously Presented): A method for fabricating a nitride spacer of a gate structure, the method comprising:

performing a first etch process using a first etchant gas, the first etch process implementing an interferometry endpoint (IEP) detection process to detect a removal of a portion of a nitride spacer layer;

discontinuing the first etch process upon removing the portion of the nitride spacer layer, leaving a thin nitride spacer layer;

performing a second etch process using a second etchant gas implementing optical emission spectroscopy (OES) endpoint monitoring process, the second etch process configured to remove the thin nitride spacer layer, leaving the nitride spacer for the gate structure, the second etchant gas configured to include a combination of O_2, HBr, and SF_6 or a combination of C_2F_6, CH_2F_2, and O_2, wherein a percentage by volume of C_2F_6 is configured to range between approximately 10% and 22%, a percentage by volume of CH_2F_2 is configured to range between approximately 37% and 58%, and a percentage by volume of O_2 is configured to range between approximately 29% and 48%; and

discontinuing the second etch process in response to the OES monitoring process.